

Low Cost, Lightweight, Multifunctional Structural Shielding Materials, Phase I

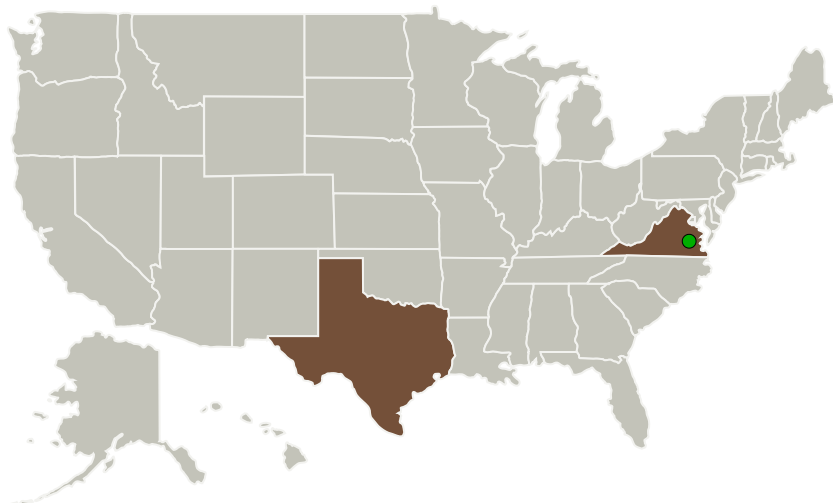
Completed Technology Project (2010 - 2010)



Project Introduction

This SBIR involves the development of a lightweight innovative material for use as structure and radiation shielding in one. APS has assembled a uniquely qualified team that includes designers, testing experts and consolidation companies to address this need. Reducing the number of parts on a vehicle is important from a cost, weight and performance aspects. Several systems and radiation sources will be evaluated, and APS will use its TRL 6 materials to meet current NASA and aerospace needs. Phase II will involve further component, characterization and performance issues.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Advanced Powder Solutions	Lead Organization	Industry	Cypress, Texas
● Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia

Primary U.S. Work Locations	
Texas	Virginia



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Project Transitions

 **January 2010:** Project Start

 **July 2010:** Closed out

Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/139173>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Advanced Powder Solutions

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

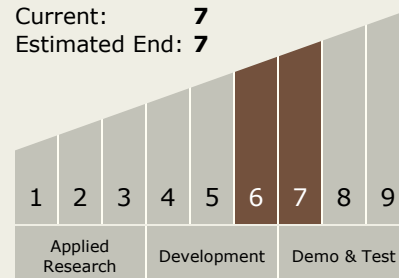
Carlos Torrez

Principal Investigator:

Dean M Baker

Technology Maturity (TRL)

Start: 6
Current: 7
Estimated End: 7



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Technology Areas

Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
 - └ TX12.1 Materials
 - └ TX12.1.1 Lightweight Structural Materials

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System